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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,809	09/29/2003	Tsann Lin	SJ09-2000-0098US2	8937

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INTELLECTUAL PROPERTY LAW OFFICES
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EXAMINER

KIM, PAUL D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,809

Applicant(s)

LIN ET AL.

Examiner

Paul D. Kim

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-20 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/29/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is a response to the election of species filed on 4/17/2006.

Election/Restrictions

1. Applicant's election without traverse of Species B, claims 16, 17 and 19, in the reply filed on 4/17/2006 is acknowledged.
2. Claims 18 and 20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/17/2006.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A Method for Fabricating a GMR Read Head Portion of a Magnetic Head--.

Claim Objections

4. Claims 16, 17 and 19 are objected to because of the following informalities:

Re. Claim 16: The phrase "second electrically insulating layer" as recited in line 10 is confused because there is no a first electrically insulating layer for consistency. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hara et al. (US PAT. 5,946,167).

Hara et al. teach a process of making a GMR sensor comprising steps of: fabricating a bottom magnetic shield layer (13); fabricating a first (or bottom) electrically insulating layer (14) upon the bottom magnetic shield layer; fabricating a GMR read sensor (15) including a plurality of films; fabricating a first electrical conductor layer (17) on a surface plane of the GMR read sensor as shown in Fig. 1; fabricating monolayer photoresist mask (21) upon the first electrical conductor layer, the etching mask including a read width trench formed therethrough as shown in Fig. 3(a); reactive-ion-etching the first electrical conductor layer through the read width trench to create two first electrical conductor layers as shown in Figs 3(a)-(d); fabricating a second (or top) electrically insulating layer (18) above the GMR read sensor layer as shown in Fig. 1; and fabricating a top magnetic shield layer (19) upon the second electrically insulating layer as shown in Fig. 1 (see also col. 4, line 44 to col. 9, line 5).

As per claim 17 the end faces of the two first electrical conductor layers are generally perpendicular to a film surface of said GMR read sensor as shown in Fig. 2.

Allowable Subject Matter

7. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: The closest reference, Hara et al., fail to teach the claimed invention such as performing reactive-ion-etching a read width within the first electrical conductor layer to form two first electrical conductor layers is performed prior to the process of fabricating the GMR read sensor. Hara et al. teach that the GMR read sensor is fabricated before the two first electrical conductor layers are formed. Therefore, it would not be obvious to modify Hara et al. by performing reactive-ion-etching to the first conductor layer to form two first electrical conductor layers before the GMR read sensor fabricated, since doing so would destroy the structure of the GMR sensor of Hara et al.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D. Kim whose telephone number is 571-272-4565. The examiner can normally be reached on Monday-Friday between 6:00 AM to 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul D Kim
Examiner
Art Unit 3729